

record. By the present remarks, Applicants submit that the rejections have been overcome, and respectfully request reconsideration of the outstanding Office Action and allowance of the present application.

***Traversal of Rejection Under 35 U.S.C. § 102(b)***

Applicants traverse the rejection of claims 46 - 97 under 35 U.S.C. § 102(b) as being anticipated by GROSSMANN et al. (U.S. Patent No. 5,635,033) [hereinafter "GROSSMANN"] or LAITINEN et al. (U.S. Patent No. 4,961,824) [hereinafter "LAITINEN"] or TURNER et al. (U.S. Patent No. 4,830,709) [hereinafter "TURNER"] or STECKENREUTER et al. (U.S. Patent No. 5,788,816) [hereinafter "STECKENREUTER"] or BLACKLEDGE et al. (U.S. Patent No. 5,468,348) [hereinafter "BLACKLEDGE"]. The Examiner asserts that each of the applied documents disclose an apparatus and process in which different plies are joined by the side having more fines. Applicants traverse the Examiner's assertions.

Applicants' independent claim 46 recites, *inter alia*, at least two formers for forming at least two layers in which *each layer has a higher content of fines on one side* respectively, and a couching zone in which the at least two layers are couching together such that *each layer's side having a higher content of fines contact each other*, wherein at least one of the at least two formers comprises *at least one gap former*. Applicants' independent claim 75 recites, *inter alia*, forming at least two layers via at least two formers, such that *each layer*

*has a side with a higher fines content*, and couching together the at least two layers in a couching zone so that *the sides with higher fines content contact each other*, wherein at least one of the two layers is formed by *at least one gap former*. Applicants submit that none of the applied documents disclose at least the above-noted features of the instant invention.

Applicants note that, while the Examiner has gone to great lengths to discuss TURNER, the Examiner has neither asserted nor can he that TURNER discloses at least one gap former, as recited in at least the independent claims. In this regard, Applicants note that the Examiner appears to have ignored the feature of the instant invention that at least one of the formers is a *gap former* to instead focus the examination on the concentration of fines. However, even in this regard, the art of record fails to anticipate the instant invention. Further, Applicants note that the art applied by the Examiner fails to provide any teaching or suggestion of couching together the sides of the layers having a higher content of fines, in which at least one of the formers is a gap former.

In the final Office Action, the Examiner has quoted column 2, lines 3 - 18, which sets forth a process to prepare the ply faces for ply bonding engagement by having "more fines and less fillers at their surface." Applicants submit that, while this passage clearly supports a position that the quantity of fines at the bonding surface is greater than a quantity of fillers (which is not what is recited in the instant claims), there is no suggestion that the layers are formed so that which *each layer has a higher content of fines on one side*, which is recited

in the pending claims, and certainly no disclosure of at least one gap former.

In fact, Applicants note that TURNER discloses that both web surfaces are similarly prepared. In this regard, Applicants direct the Examiner's attention to column 1, lines 52 - 57, which discloses that the top ply is produced to have "a more uniform distribution of fines, fillers, and fibers on *both its sides*, thus, providing its surfaces with a greater affinity for ply bonding." [emphasis added].

Thus, Applicants submit that, if TURNER seeks to obtain a uniform distribution of fines on both sides, this document fails to provide any disclosure or even any suggestion of producing a web ply having a higher fines content on one side, as recited in Applicants' independent claims.

Moreover, because TURNER fails to provide any disclosure of preparing web plies to be bonded together to have a higher fines content on one side, and fails to provide any disclosure of at least one gap former, Applicants submit that there is certainly no disclosure or suggestion of couching together the sides having the higher fines content, as recited in the independent claims.

Thus, Applicants submit that, in contrast to the features of the instant invention, TURNER fails to disclose an apparatus having at least two formers, including at least one gap former, for forming at least two layers in which *each layer has a higher content of fines on one side respectively*, and a couching zone in which the at least two layers are couchd

together such that *each layer's side having a higher content of fines contact each other*, as recited in at least independent claim 46. Moreover, Applicants submit that TURNER also fails to disclose a process including forming at least two layers via at least two formers, including at least one gap former, such that *each layer has a side with a higher fines content*, and couching together the at least two layers in a couching zone so that *the sides with higher fines content contact each other*, as recited in at least independent claim 75.

Applicants further submit that GROSSMANN, LAITINEN, BLACKLEDGE, and STECKENREUTER each fail to disclose the above-noted subject matter of the instant invention. In particular, Applicants note that the none of the applied documents provide any teaching of that each layer is formed to have a higher fines content on one side than on the other, and certainly none of these documents disclose that the layers are couched together so that the sides having the higher fines content contact each other, as recited in at least independent claims 46 and 75.

While the Examiner asserts that these additional documents teach multi-ply papers having plies bonded by the air side of the ply, that it is well known that this air side produces a side of the web with the most fines, and that the air sides are bonded together, the Examiner has not pointed to any specific <sup>?</sup>disclosure in these documents to support his assertions.

In this regard, Applicants wish to correct the record with regard to the basis for Examiner's assertions, i.e., Applicants have not admitted that it is well known that the air

side of the web contains the most fines due to less dewatering. While the "Background of the Invention" section of the instant application identifies a number of known formers, this disclosure also sets forth specific action necessary to achieve a concentration of fines at a particular side of the web.

Further, Applicants submit that, with the exception of STECKENREUTER, the art applied by the Examiner does not provide any disclosure or suggestion of utilizing a gap former, and none of the applied documents provide any disclosure of using at least two formers, at least one of which is a gap former, to obtain at least two layers in which each layer has a side with a higher content of fines, and couching the sides with higher content of fines together. Moreover, the applied art likewise fails to disclose or suggest any intention in these processes to form a web layer with a gap former in which the layer has a higher content of fines on one side, as recited in at least Applicants' independent claims.

Applicants note that, while the additional documents applied by the Examiner provide some disclosure of obtaining a greater concentration of fines at the bonding surface, there is no teaching or suggestion that the individual layers in the applied art are formed such that each layer has a higher content of fines on one side, and certainly no teaching or suggestion that this is achieved through the use of at least one gap former.

Further, Applicants note that the apparatuses disclosed by each applied document cannot produce web plies in which each web ply has higher fines content on one side of the

web, and the Examiner has provided no evidence to refute this. Applicants submit that, as the web plies cannot be produced in the manner recited in the pending claims, the apparatus cannot join together sides of the web plies having the higher fines content.

Because the applied documents fail to disclose at least the above-noted features of the instant invention, Applicants submit that the applied art fails to disclose each and every recited feature of the instant invention. Accordingly, Applicants submit that the Examiner has failed to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b), and that the instant rejections are improper and should be withdrawn.

Further, Applicants submit that claims 47 - 74 and 76 - 97 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims further define the features of the instant invention. In particular, Applicants submit that none of the applied documents anticipate, *inter alia*, the fibrous web comprises one of a paper web and cardboard web, as recited in claim 47; said at least one gap former comprises two circulating continuous dewatering belts convergently arranged to form a headbox nip, and in which said dewatering belts are guided in an area of said headbox nip over a forming element, as recited in claim 48; a headbox arranged to supply a fibrous suspension to said headbox nip, as recited in claim 49; said forming element comprises a forming roll, as recited in claim 50; said at least one gap former comprises a first gap former and a second gap

former arranged to form at least two layers, wherein the higher content of fines side of said at least two layers occurs on a forming element side, as recited in claim 51; the web travel directions of said first and second gap formers are opposite each other, as recited in claim 52; a first layer created in said first gap former is guided together with at least one of said two dewatering belts around a deflection element, and then introduced via a continuous belt, traveling in a generally opposite direction to a stream direction of said headbox, into said couching zone in which the first layer and a second layer formed by said second gap former are couched together so that their sides having a higher content of fines come into contact with each other, as recited in claim 53; said deflection element comprises a deflection roll, as recited in claim 54; the first layer is guided around said deflection element together with an outer dewatering belt of said two dewatering belts, which does not come into contact with said forming element, and which is introduced into said couching zone via said outer dewatering belt, as recited in claim 55; said two dewatering belts are guided around said deflection element, and an inner dewatering belt of said two dewatering belts is separated from said outer dewatering belt which entrains the first layer following said deflection element, as recited in claim 56; said outer dewatering belt of said first gap former is guided in a generally horizontal direction, at least up to said couching zone, as recited in claim 57; a fourdrinier former, wherein a third layer is created by said fourdrinier former and sheet formation of the third layer occurs with the higher content of fines on an outer side of the

third layer facing away from said continuous belt, wherein the first layer is guided over said deflection element and is couched together with the third layer; and wherein the first layer and third layer are introduced via said continuous belt into said couching zone in which the first layer and second layers, are couched together so that their sides having higher content of fines come into contact with each other, as recited in claim 58; said outer dewatering belt of said first gap former is separated in web travel direction in front of said deflection element from an inner dewatering belt and the first layer is guided around said deflection element only together with said inner dewatering belt, as recited in claim 59; the third layer and the first layer are couched together in the area of at least one of said deflection element and in a couching roll, as recited in claim 60; after separation of said two dewatering belts of said second gap former, the second layer is introduced together with said outer dewatering belt into said couching zone in which the first and second layers are couched together so that their sides having a higher content of fines come into contact with each other, as recited in claim 61; a first layer of the at least two layers to be couched together, is created by a fourdrinier former and sheet formation of the first layer occurs with the higher content of fines on an outer side facing away from a continuous wire, and wherein a second layer is created by said at least one gap former and sheet formation occurs in the second layer with a higher content of fines on the forming element side, as recited in claim 62; a stream direction of a headbox associated with said first gap former correlates in general with the travel direction of the first

layer created by said fourdrinier former, as recited in claim 63; the second layer created by said at least one gap former is introduced, after a separation of said two dewatering belts of said at least one gap former, together with said outer dewatering belt into said couching zone in which the second layer is joined with said continuous belt for the first and second layers to be couched together, as recited in claim 64; said continuous wire is guided in said couching zone in a generally horizontal direction, as recited in claim 65; a second gap former arranged to form a third layer, wherein sheet formation of the third layer occurs with a higher content of fines on a forming element side, and wherein the third layer is couched together with the second layer in a second couching zone, as recited in claim 66; the stream direction of a headbox associated with said second gap former corresponds to the travel direction of the first layer created by said fourdrinier former, as recited in claim 67; the third layer is introduced after separation of said two dewatering belts of said second gap former together with said outer dewatering belt into said second couching zone, wherein the second layer is brought together with said continuous belt for couching together the second and third layers formed by said first and second gap formers, as recited in claim 68; said continuous wire is guided at least in the area of said couching zones in a generally horizontal direction, as recited in claim 69; at least one additional gap former arranged for the formation of an at least three-layered fibrous web, wherein sheet formation of the additional layer occurs with a higher content of fines on the forming element side, wherein the additional layer is couched

in an additional couching zone with one of the at least two layers formed by the first or second gap former, and where at least one of the at least two layers is couched together with the additional layer so that their sides having higher content of fines come into contact with each other, as recited in claim 70; the stream direction of said headbox associated with said at least one additional gap former corresponds to the travel direction of the fibrous web to be created, as recited in claim 71; at least one of a multi-layered headbox and a single layered headbox is provided, as recited in claim 72; at least one single layered headbox is provided, as recited in claim 73; uniform pressure dewatering elements for web dewatering, as recited in claim 74; the fibrous web comprises one of a paper web or a cardboard web, as recited in claim 76; the at least one gap former comprises two circulating continuous dewatering belts that run together forming a headbox nip and which are guided in the area of the headbox nip, loaded with a fibrous suspension by a headbox, over a forming element, as recited in claim 77; the forming element comprises a forming roll, as recited in claim 78; the at least one gap former comprises a first gap former and a second gap former arranged to form at least two layers, wherein the higher content of fines side of said at least two layers occurs on a forming element side, as recited in claim 79; the first and second gap formers are operated in opposite web travel directions, as recited in claim 80; a first layer formed in the first gap former is guided together with at least one of the two dewatering belts around a deflection element, and then via a continuous belt is introduced in a direction generally opposite to the travel

direction of a first headbox into the couching zone in which the first layer and a second layer formed by the second gap former are couched together so that their sides having a higher content of fines come into contact with each other, as recited in claim 81; the deflection element comprises a deflection roll, as recited in claim 82; the first layer created in the first gap former is guided together with an outer dewatering belt, which does not come into contact with the forming element, around the deflection element and introduced into the couching zone via the outer dewatering belt, as recited in claim 83; the two dewatering belts are guided around the deflection element and the an dewatering belt is separated from the outer dewatering belt entraining the layer consecutive to the deflection element, as recited in claim 84; a third layer is created by a fourdrinier former and sheet formation of the third layer occurs with the higher content of fines on an outer side facing away from the continuous belt, wherein the first layer is guided over the deflection element and is couched together with the third layer formed by the fourdrinier former, and wherein the first and third layers are introduced via the continuous belt into the couching zone in which the layers formed by the first and third formers are couched together so that their sides having a higher content of fines come into contact with each other, as recited in claim 85; the outer dewatering belt of the first gap former is separated in web travel direction in front of the deflection element from the inner dewatering belt and the first layer is guided around the deflection element only together with the inner dewatering belt, as recited in claim 86; the

third layer and the first layer formed in the first gap former are couched together in the area of at least one of the deflection element and a couching roll, as recited in claim 87; the second layer is guided after the separation of the two dewatering belts of the second gap former together with the outer dewatering belt to the couching zone, in which the first and second layers are couched together so that their sides of higher content of fines come into contact with each other, as recited in claim 88; the first of the at least two layers to be couched together is created by a fourdrinier former and sheet formation of the first layer occurs with a higher content of fines on the outside facing away from the continuous wire, and the second layer is created by the at least one gap former and sheet formation occurs in the second layer with a higher content of fines on a forming element side, as recited in claim 89; the stream direction of a headbox associated with the first gap former correlates in general with the travel direction of the first layer created by the fourdrinier former, as recited in claim 90; the second layer created by the at least one gap former is guided to the couching zone after separation of the two dewatering belts of the at least one gap former together with the outer dewatering belt, in which the second layer is joined together with the continuous belt for the first and second layers to be couched together, as recited in claim 91; a second gap former is arranged to form a third layer wherein sheet formation of the third layer occurs with a higher content of fines on the forming element side, and wherein the third layer is couched together with the second layer in a second couching zone, as recited in claim 92; the

stream direction of a headbox associated with the second gap former corresponds to the travel direction of the first layer formed by the fourdrinier former, as recited in claim 93; the third layer is introduced after separation of the two dewatering belts of the second gap former together with the outer dewatering belt into the second couching zone in which it is brought together with the continuous belt for the couching of the second and third layer formed by the first and second gap formers, as recited in claim 94; at least one additional gap former is arranged for the formation of an at least three-layered fibrous web, wherein sheet formation of the additional layer occurs with a higher content of fines on the forming element side, wherein the additional layer is couched in an additional couching zone with one of the at least two layers formed by the first or second gap former, and where at least one of the at least two layers is couched together with the additional layer so that their sides having higher content of fines come into contact with each other, as recited in claim 95; the stream direction of a headbox associated with the additional gap former corresponds to the travel direction of the fibrous web to be created, as recited in claim 96; and at least one of a multi-layered headbox and single-layered headbox is used, as recited in claim 97.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 46 - 97 under 35 U.S.C. § 102(b), and indicate that these claims are allowable.

*Application is Allowable*

Thus, Applicants respectfully submit that each and every pending claim of the present invention meets the requirements for patentability under 35 U.S.C. §§ 102 and 103, and respectfully request the Examiner to indicate allowance of each and every pending claim of the present invention.

*Authorization to Charge Deposit Account*

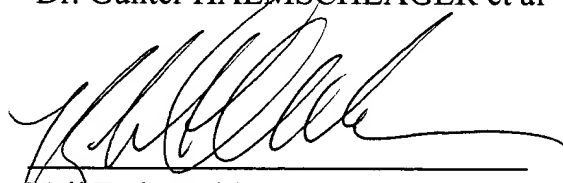
The Commissioner is authorized to charge to Deposit Account No. 19 - 0089 as any necessary fees, including any extensions of time fees required to place the application in condition for allowance by Examiner's Amendment, in order to maintain pendency of this application.

**CONCLUSION**

In view of the foregoing, it is submitted that none of the references of record, either taken alone or in any proper combination thereof, anticipate or render obvious the Applicants' invention, as recited in each of claims 46 - 97. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate.

Respectfully submitted,  
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